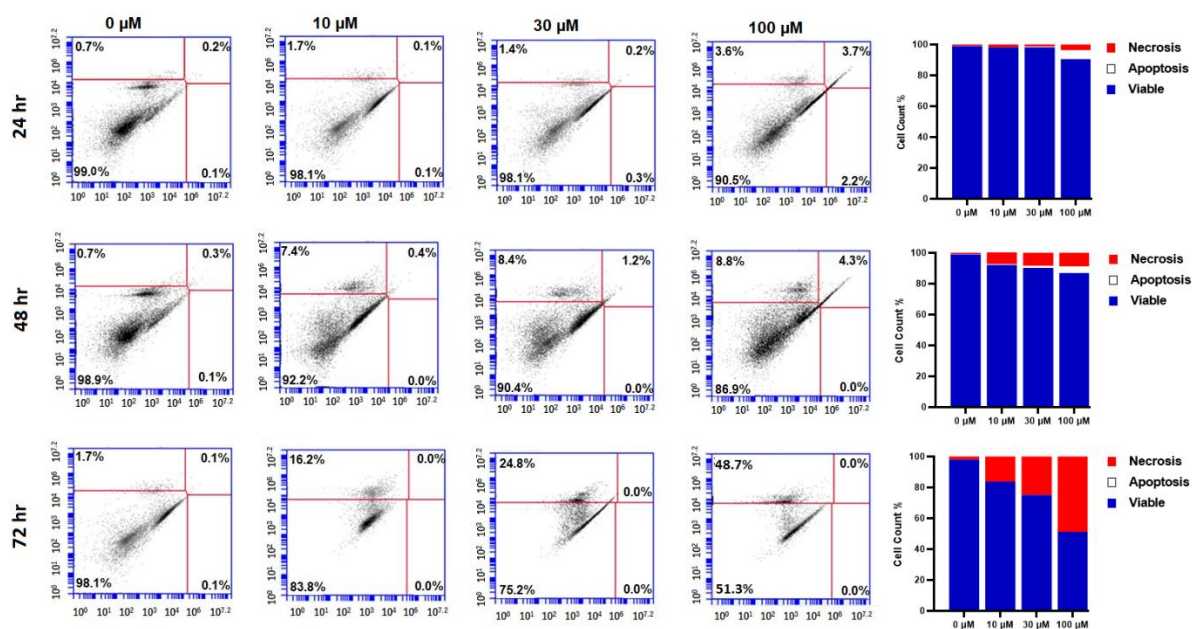


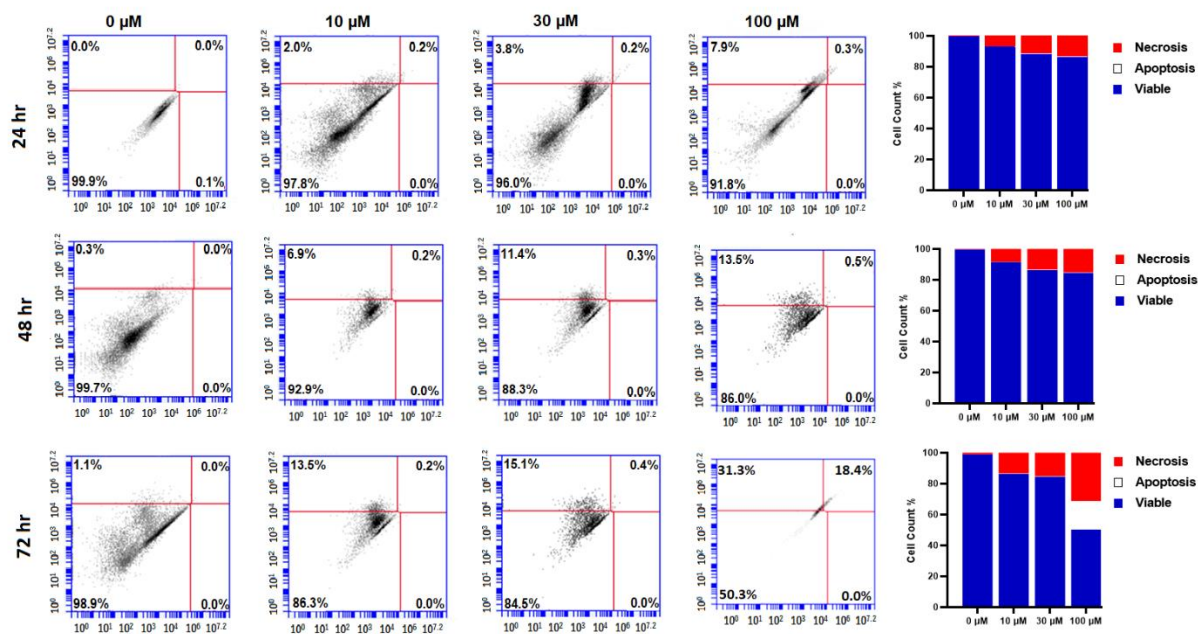
Supplementary Figure 1; S1: The chemical structure of berberine

Supplementary Figure 2, S2

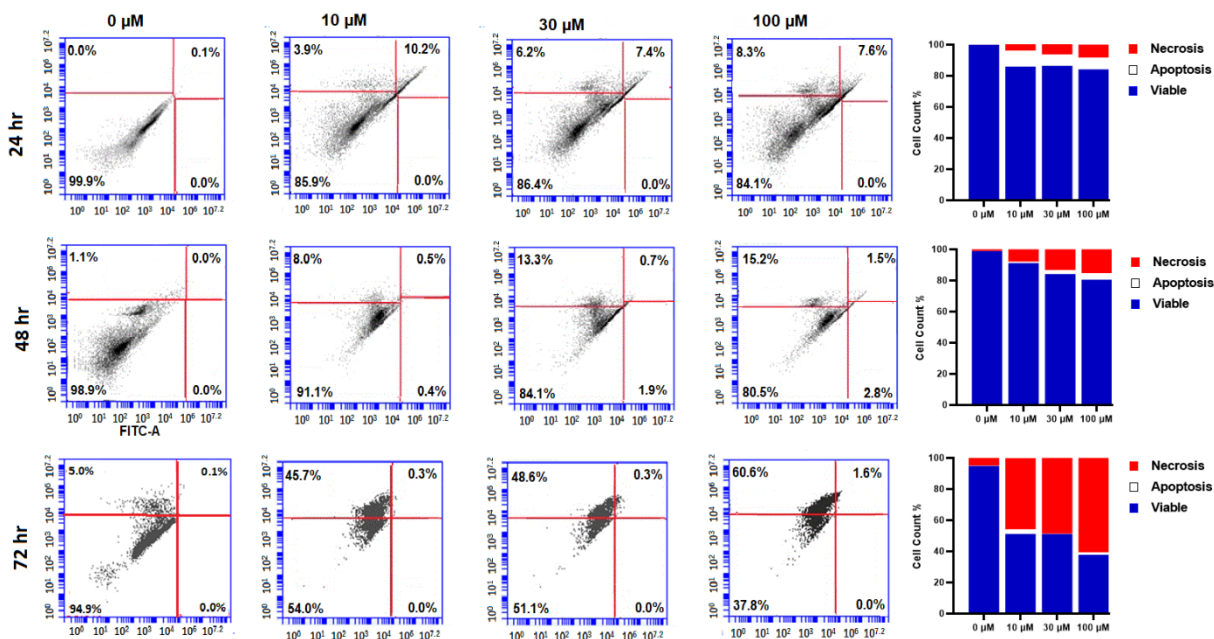
## 1. HT-29



## 2. SW-480

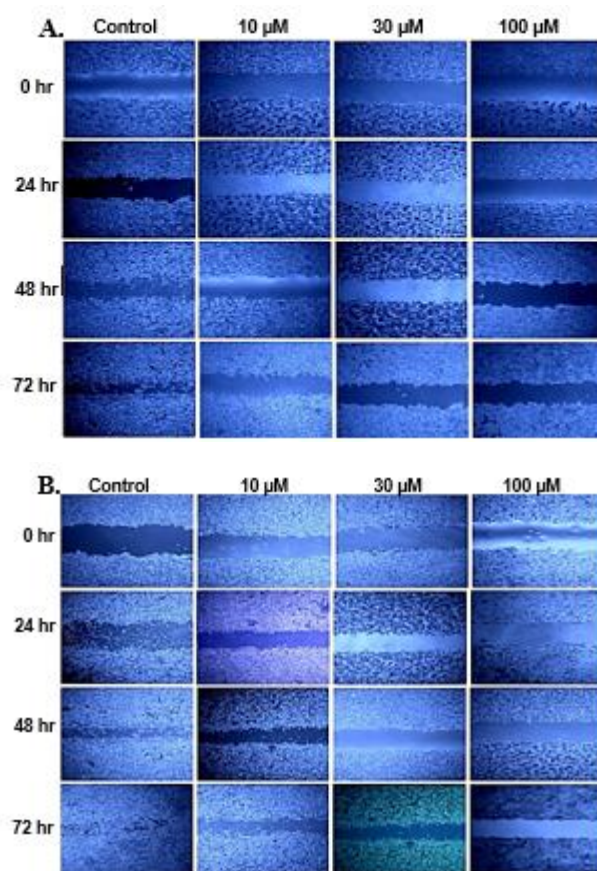


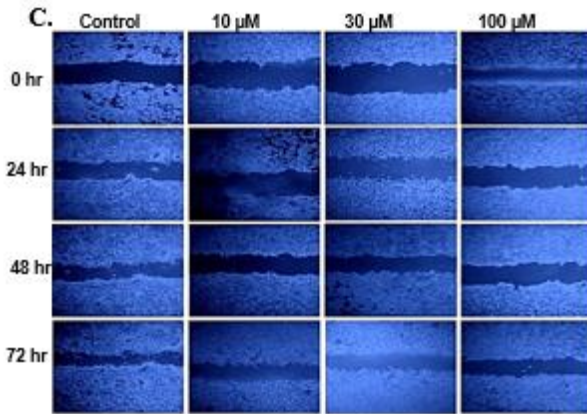
### 3. HCT-116



*Supplementary Figure 2; S2:* Representative flow cytometry plots using annexin V-FITC/PI staining for apoptosis and necrosis after 24, 48 and 72 hrs. (left panels). (A) HT-29, (B) SW-480 and (C) HCT-116 cells were treated with the indicated concentrations of berberine. Cell count percentages for each cell type over 24, 48, or 72 hrs. are shown (right panels).

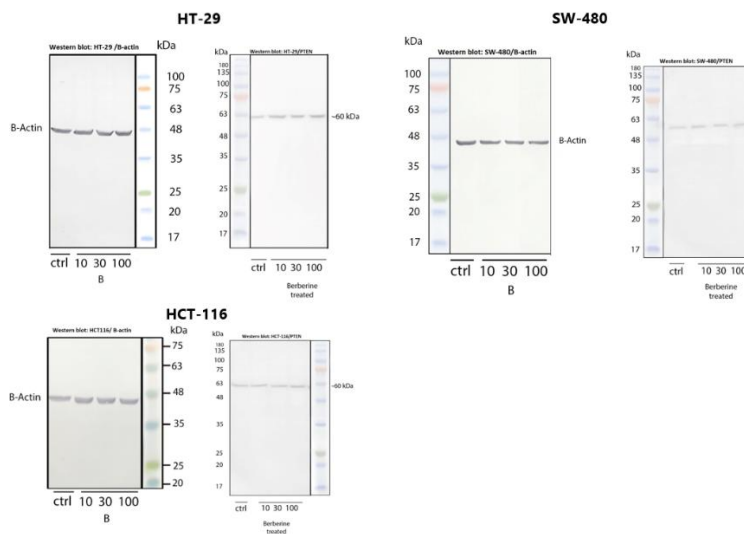
*Supplementary Figure 3; S3*





*Supplementary Figure 3; S3:* Effect of berberine on HT-29 (A), SW-480 (B) and HCT-116 (C) cell migration. Migration of colon cancer cell lines was assayed by wound-healing assay and analyzed by one-way ANOVA followed by Dunnett's multiple comparison test for control and treated groups at 0, 24, 48, and 72 hrs.

***Supplementary Figure 4; S4***



*Supplementary Figure 4; S4:* Original gels for  $\beta$ -actin and PTEN for HT-29, SW-480, and HCT-116 cell lines. Western blots for PI3K, AKT, p-AKT, m-TOR, and p-mTOR are available upon request.

The Graphical Abstract

